

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 24

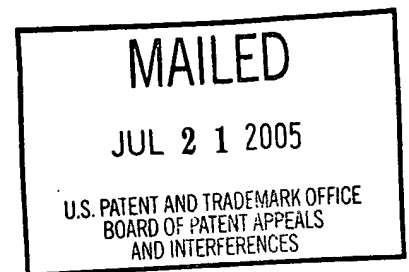
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

***Ex parte*** HIROKI ENDO, TAICHI NATORI, and SYUNJI HORIUCHI

Appeal No. 2004-1528  
Application No. 09/272,331

HEARD: February 22, 2005



Before KRASS, GROSS, and NAPPI, ***Administrative Patent Judges.***  
GROSS, ***Administrative Patent Judge.***

***REQUEST FOR REHEARING***

In a decision dated March 16, 2005, the decision of the examiner rejecting all of the claims on appeal under 35 U.S.C. § 103 was affirmed. Appellants have filed a Request for Rehearing in response to that decision.

Appellants argue (Request, page 2) that claims 3, 8, and 17 should have been treated by the Board separately from claims 1, 2, 4, 6, 7, and 9 through 16, since the two groups of claims were rejected under separate statutes in the Final Rejection.

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Specifically, appellants explain that claims 1, 2, 4, 6, 7, and 9 through 16 were rejected in the Final Rejection under 35 U.S.C. § 102(b) and claims 3, 8, and 17 were rejected under 35 U.S.C. § 103(a).

As explained in the Decision (page 2, footnote 2, and pages 3-4), appellants filed an amendment August 14, 2003, after the Final Rejection, taking the limitation of a photoresist from claims 3, 8, and 17, and adding it to each of independent claims 1, 6, and 12. The examiner indicated in an Advisory Action dated September 10, 2003, that the amendment would be entered on appeal. Further, the examiner explained that Needham had been applied against claims 3, 8, and 17 for its teachings regarding photoresists, thereby implying that the rejection of all the claims would require Needham for the limitation added by amendment. The examiner, in the Examiner's Answer, did in fact apply a combination of Snow and Needham to all of the claims as expected. Therefore, the only rejection before us on appeal for claims 1 through 4 and 6 through 17 was an obviousness rejection over Snow and Needham. Further, the only arguments in the primary Brief for claims 3, 8, and 17 were directed to the use of a dye containing photoresist in general and to overlapping such filter layers. Thus, the arguments supplied by appellants in the

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Brief for claims 3, 8, and 17 were no longer specific to claims 3, 8, and 17, as they applied to all of the rejected claims.<sup>1</sup> Accordingly, this point has not been misapprehended or overlooked by the Board.

However, we note that appellants presented arguments in the Reply Brief regarding the second and third layers both being made of a dye containing photoresist, as recited in claims 3, 8, and 17. Such arguments should have been treated as being new arguments that were untimely and, therefore, waived in accordance with 37 C.F.R. § 1.192(a) (which was in effect at the time of the Brief), but we did consider them at pages 5-6 of the Decision. Upon reconsideration, in light of appellants' arguments at pages 5-11 of the Request, we note an error in our evaluation of the references as it pertains to claim 3, as discussed *infra*.

Appellants argue (Request, page 4) that Snow teaches using a polymeric mordant to eliminate the need for blending with it a photoresist polymer to form a filter element, and, therefore, does not teach why the skilled artisan would have used a dye containing photoresist. Appellants recognize (Request, page 4)

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<sup>1</sup> We further noted in the Decision (page 3) that in the Reply Brief at pages 3-4, appellants acknowledged the examiner's withdrawal of the anticipation rejection (though not the substitution of the obviousness rejection).

that the Decision relies upon Needham for the teaching of a dye containing photoresist, but contend (Request, pages 4-5) that Needham's Figure 4B (referenced by the Board in the Decision at pages 4-5) fails to disclose more than one filter layer being made from a dye containing photoresist, as required by claims 3, 8, and 17.

As explained in the Decision (pages 5-6), Needham discloses (column 1, lines 29-31) that three color filters are formed of either red, green, and blue or cyan, yellow, and magenta. Snow teaches (column 29, line 65-column 30, line 2) that for red, green, and blue filters, an arrangement of two superimposed layers each containing a different subtractive primary dye "offers advantages in light transmission and absorption as compared to employing a filter constructed of an additive primary dye." Needham further discloses in the description of Figure 4B (column 10, lines 53-56, and column 11, lines 9-20) forming a red, green, and blue color filter using dye containing photoresists for cyan and magenta layers (formed by the method of U.S. Pat. No. 4,808,501 as described in column 2, lines 49-66). Thus, Needham does disclose more than one filter layer being made from a dye containing photoresist.

Appellants contend (Request, page 5) that claims 3, 8, and 17 require a third color different from the second color and both on the filter layer of the second color and also on the substrate, and that Needham's "layer 22M is precluded from being the claimed filter layer of a third color since layer 22M of Needham is not formed both on a filter layer of a second color and on the substrate 10." We will consider claim 3 separately from claims 8 and 17.

Claim 3 requires that second and third color layers, each made of a dye containing positive photoresist, be formed such that the third color overlaps both the second color and the substrate. In Needham, the only color that overlaps another color and also the substrate is the cyan layer, which satisfies the requirements of the third layer. However, the cyan overlaps the yellow color filter, which is not made from a dye containing photoresist. Further, the combined teachings of Snow and Needham do not suggest modifying the yellow layer to be made from a dye containing photoresist. Thus, the yellow filter cannot be the claimed second color layer. Therefore, we cannot sustain the rejection of claim 3 over Snow and Needham.

Claims 8 and 17 also recite second and third color layers, each of a dye containing photoresist. However, in claims 8 and

17 the second color overlaps the third color, and in claim 8 the second color is also in the same row as the third color. Claims 8 and 17 do not recite that one of the two dye containing photoresist layers overlaps both the substrate and also the other dye containing photoresist layer. Thus, the limitations of claims 8 and 17 differ from those of claim 3. As indicated in the Decision (page 5), Needham shows in Figure 4B and discloses (column 10, line 53-column 11, line 20) magenta and cyan layers, 22M and 22C, formed by the process of U.S. Pat. No. 4,808,501, which Needham describes (column 2, lines 49-66) as using dye containing positive photoresists. As shown in Figure 4B, part of the magenta (or second color) overlaps a portion of the cyan (or the third color), and the other part of the magenta is at the same level (or in the same row) as the cyan. Thus, Needham does satisfy the limitations of claims 8 and 17.

Appellants argue (Request, pages 5-6) that Needham's yellow filter is not made from a dye containing positive photoresist, and therefore cannot satisfy the claimed second color for claims 3, 8, and 17. As indicated *supra*, we agree with appellants as to claim 3, but claims 8 and 17 lack the limitation argued. The magenta layer of Needham satisfies all of the claim requirements for the second color layer of claims 8 and 17.

Appellants assert (Request, pages 6-9) that Needham fails to disclose that absorber layer 12 or barrier layer 14, the two layers that form the yellow filter, are formed of a photoresist. Along the same lines, appellants contend (Request, pages 10-11) that neither Needham nor Snow discloses that the yellow filter is made of a dye containing positive photoresist. Although appellants fail to link these arguments to any particular claims, we assume that the arguments are directed to the limitation of claims 3, 8, and 17 that the second layer must be a photoresist. As indicated *supra*, we agree that Needham's yellow filter is not a dye containing photoresist and, therefore, cannot satisfy claim 3's second color layer, and no other layer satisfies the limitation of being under a color layer that also overlaps the substrate. However, for claims 8 and 17, the requirements for the second and third layers are different, and the second and third layers are met by Needham's magenta and cyan layers, respectively.

Appellants (Request, pages 11-13) argue that Snow teaches away from using a photoresist polymer as a filter layer, as Snow uses a polymeric mordant to eliminate the need for blending with it a photoresist polymer. Accordingly, appellants conclude that

it would not have been obvious to modify Snow to include dye containing photoresists.

As indicated in the Decision (pages 5 and 7-8), Needham teaches all of the limitations of representative claim 1, with Snow merely being cumulative. Therefore, arguments directed to the modification of Snow are considered moot.

Appellants contend (Request, page 15) that nothing within Yamada, Ugai, or Needham suggests a relationship between a photoresist and a yellow color toner as recited in claim 5. Appellants assert (Request, pages 15-16) that Yamada and Ugai teach a pigment for yellow toner, but both fail to teach or suggest that the disclosed pigments would be compatible with Needham's photoresist. Similarly, appellants argue (Request, pages 16-18) that Yamada and Ugai disclose cyan and magenta pigments for toner, but fail to teach or suggest that the disclosed pigments would also be suitable for a photoresist.

As stated in the Decision (page 7), since Needham failed to disclose the particular pigments used for the yellow, cyan, and magenta color filters, the skilled artisan would have turned to well-known pigments. Yamada and Ugai evidence that the pigments recited in claim 5 not only were known, but also were employed for the colors as claimed. Although Yamada and Ugai used the



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pigments for toner rather than in photoresists, we find no evidence, and appellants have provided none, that would suggest that known toner pigments would not also be compatible with photoresists. By pointing out Needham's lack of specifics for the pigments, and establishing that the claimed pigments were known for the recited colors, the examiner established a **prima facie** case of obviousness. The burden then shifted to appellants to show why it would not have been obvious to the skilled artisan to use the pigments of Yamada and Ugai with Needham's photoresists. Appellants provided no evidence or convincing arguments to rebut the **prima facie** case of obviousness.


#### **CONCLUSION**

Appellants' request for rehearing has been considered and has been denied as to the rejection of claims 1, 2, and 4 through 17. However, appellants' request for rehearing has been granted with regard to claim 3. In other words, the request for rehearing has been denied-in-part and granted-in-part. In summary, the rejection of claims 1 through 17 under 35 U.S.C. § 103 is reversed as to claim 3 and remains affirmed as to claims 1, 2, and 4 through 17.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

**REHEARING  
GRANTED-IN-PART**

  
ERROL A. KRASS )  
Administrative Patent Judge )

*Anita Pellman Gross*  
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Administrative Patent Judge

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Administrative Patent Judge

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